

**From:** [Mitchell, Tanya](#)  
**To:** [Hagerman, Paul](#)  
**Cc:** [Amy Darpinian](#); [Chenenko, Ricky](#); [Donovan, Betsy](#)  
**Subject:** RE: Rolling Knolls  
**Date:** Thursday, September 17, 2015 3:41:14 PM

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Hi Paul,

Thanks for the follow-up. It appears that the VOC findings in soil has been confirmed and we can move forward with ARCADIS recommendation. Similar findings were also observed for the sediment samples. However, follow-up is need to correct the data reported by ARCADIS for SD-41 and SD-34.

Based on CDMs review of VOCs for the site, we can implement the reduction in VOC sampling at the site.

Please let me know if you have any additional concerns.

Thanks,

Tanya

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**From:** Hagerman, Paul [mailto:HagermanPR@cdmsmith.com]  
**Sent:** Thursday, September 17, 2015 3:27 PM  
**To:** Mitchell, Tanya  
**Cc:** Amy Darpinian ; Chenenko, Ricky  
**Subject:** RE: Rolling Knolls  
Evaluation of ARCADIS VOC Memo concerning Rolling Knolls site

Soils:

CDM agrees with ARCADIS assessment of VOC in soil. We identified the same exceedances in soil as did ARCADIS:

- POI-3 – carbon tetrachloride and chloroform
- SS-52 – chloroform
- SS-103 – chloroform
- SS-109 – chloroform and xylenes

We agree that VOCs at interior locations are horizontally delineated (i.e. SS-52 and SS-103). ARCADIS has proposed further delineation from POI-3 and SS-109.

Sediment:

Since there are no sediment standards, and delineation is to Residential Direct Contact Soil Remediation Standards (RDCSRS), we compared VOCs in sediment to the RDCSRS and found no exceedances. As ARCADIS compared sediment VOCs to Ecological Screening Criteria, CDM performed a similar evaluation and found the following exceedances.

- Chorobenzene exceeds ecological screening criteria at SD-41; this is an interior sample location and as such does not drive additional lateral delineation samples.

The following requires further discussion/clarification regarding VOCs in sediment

- ARCADIS asserts that reported sediment concentrations of acetone and 2-butanone do not likely represent environmental conditions because they were widespread (including at upgradient locations) and they are common laboratory contaminants. However, CDM Smith notes that the upgradient concentrations are generally lower than the on-site/downgradient concentrations, and that the presence hundreds of µg/kg is not easily attributed to laboratory contamination (this could possibly be the case of the samples were diluted, and contamination introduced after dilution).

- The CDM Smith data table does not match the data reported by ARCADIS for SD-41. Our data table shows non-detect for methylene chloride and 1,4-dichlorobenzene, the two compounds ARCADIS indicated exceed ecological screening criteria at this location.
- It appears some sediment sample designations have been used twice. For example, an SD-34 sample from 2008 is north of the site at Black Brook. There is an SD-34 shown west of the landfill near MW-10. We assume this was the SD-34 collected in 2014.

Paul Hagerman, P.E.

CDM Smith

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**From:** Mitchell, Tanya [<mailto:Mitchell.Tanya@epa.gov>]

**Sent:** Tuesday, September 15, 2015 6:24 AM

**To:** Hagerman, Paul <[HagermanPR@cdmsmith.com](mailto:HagermanPR@cdmsmith.com)>

**Cc:** Amy Darpinian <[amy.f.darpinian@usace.army.mil](mailto:amy.f.darpinian@usace.army.mil)>; Chenenko, Ricky  
<[ChenenkoRA@cdmsmith.com](mailto:ChenenkoRA@cdmsmith.com)>

**Subject:** RE: Rolling Knolls

Thanks, Paul. The immediate question is to confirm the VOC findings reported by ARCADIS.

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**From:** Hagerman, Paul [<mailto:HagermanPR@cdmsmith.com>]

**Sent:** Monday, September 14, 2015 5:11 PM

**To:** Mitchell, Tanya

**Cc:** Amy Darpinian; Chenenko, Ricky

**Subject:** Re: Rolling Knolls

We reviewed the tasks, we will provide a response to the questions raised this morning by Friday at noon. However, we understand the schedule needs and will do everything possible to get those answers sooner than that.

*Sent from my Verizon Wireless 4G LTE DROID*

"Mitchell, Tanya" <[Mitchell.Tanya@epa.gov](mailto:Mitchell.Tanya@epa.gov)> wrote:

Hello All,

Attached are NJDEP comments for review in preparation of our call.

Thanks,

Tanya